

Name: _____

at1110paper__practice__test (v4)

1. Factor the expression.

$$x^2 - 3x - 54$$

$$(x - 9)(x + 6)$$

2. Expand the following expression into standard form.

$$(9x + 4)(8x + 7)$$

$$72x^2 + 63x + 32x + 28$$

$$72x^2 + 95x + 28$$

3. Expand the following expression into standard form.

$$(9x + 2)(9x - 2)$$

$$81x^2 - 18x + 18x - 4$$

$$81x^2 - 4$$

4. Expand the following expression into standard form.

$$(2x - 5)^2$$

$$4x^2 - 10x - 10x + 25$$

$$4x^2 - 20x + 25$$

5. Factor the expression.

$$64x^2 - 9$$

$$(8x - 3)(8x + 3)$$

6. Solve the equation with factoring by grouping.

$$20x^2 - 8x + 15x - 6 = 0$$

$$(4x + 3)(5x - 2) = 0$$

$$x = -\frac{3}{4} \quad x = \frac{2}{5}$$

7. Solve the equation.

$$9x^2 + 59x + 12 = 2x^2 - 5x + 3$$

$$7x^2 + 64x + 9 = 0$$

$$(7x + 1)(x + 9) = 0$$

$$x = -\frac{1}{7} \quad x = -9$$

8. Solve the equation.

$$(3x - 8)(5x - 6) = 0$$

$$x = \frac{8}{3} \quad x = \frac{6}{5}$$